

Remarks/Arguments

This Response is considered fully responsive to the Office Action mailed November 20, 2007. Claims 1, 3-18 and 20-30 stand rejected. In this Response, claims 1, 15, 16, 18, 20 and 26 have been amended. New claim 31 has been added. No claims are canceled. Claims 1, 3-18 and 20-31 are pending in the application. A Request for Continued Examination is filed concurrently with this Response. Entry of the amendments, reexamination and reconsideration are requested.

Examiner's Objection to the Specification

The Examiner has objected to the disclosure of the instant application for an informality in the specification. Applicant has amended the specification as set forth herein and believes that the specification has been corrected and is in a condition to overcome the Examiner's objection. As such, Applicant requests that the objection to the specification be withdrawn.

Claim Objections

The Examiner has objected to claims 1, 11, 15, 18 and 20 for certain informalities. Applicant has responded to each of the objections below:

- a. Examiner objects to claim 1 at line 5, requesting that the term "criteria" be changed to "criterias" because there are more than one selection criteria. Applicant notes that the term "criteria" is the plural of the word "criterion".¹ Accordingly, the suggested amendment is not necessary.
- b. Examiner objects to claim 11 because the term "resource information" apparently lacks antecedent basis. Claim 1 has been amended to specifically recite the term "resource information". As such, Applicant believes the objection has been overcome.
- c. Examiner objects to the term "resource descriptor" in claim 15 because the term "resource descriptor" is allegedly not mentioned in the specification. Although Applicant believes the term "resource descriptor" is defined in the claim itself and sufficiently described in the specification (the term was included in the claim as originally filed, and therefore is part of

¹ See, e.g., "The American Heritage Dictionary, Second College Edition", Houghton Mifflin Company, © 1982, p. 341, "criterion ... n. pl. -teria".

the specification), the Applicant has amended Claim 15 to change “resource descriptor” to “resource identifier”. Applicant believes the objection has been overcome.

d. Examiner objects to the term “task objects” in claim 18 because the meaning of the term is allegedly unclear. According to the specification, “[i]n an implementation, the task containers 104, resource containers 108 and other modules are software objects that include data and methods...” As such, an object is a particular software implementation of a container.

e. Examiner objects to the term “function” in claim 18 and suggests the term should be rewritten in the plural as “functions”. Applicant has amended claim 18 and believes the objection has been overcome.

f. Examiner objects to claim 20 as depending on cancelled claim 19. Claim 20 has been amended to depend from claim 18.

Rejections Under 35 U.S.C. § 112

Claims 1, 3-18 and 20-25 are rejected under 35 U.S.C. § 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter.

The Examiner asserts that at claim 1, line 2 it is unclear whether each task container has one task or a plurality of tasks in each task container. Claim 1 has been amended to read in part “a plurality of task containers, each said task container representing a task to be scheduled”.

The Examiner asserts that at claim 1, line 3 it is unclear whether resource containers are the actual resources in a task container or they are just resource information stored in task containers. The Examiner asserts that at claim 1, line 4 it is unclear whether “each resource container” is the same resource container as “a plurality of resource containers” of line 3. Claim 1 has been amended to read in part “where each said task container includes a grouping of a plurality of resource containers, wherein each said resource container includes resource information that specifies one or more resources required for the represented task and selection criteria to select from the one or more resources”.

The Examiner asserts that at claim 1, line 5 it is unclear what is meant by “the represented task”, and inquires whether it is one of the plurality of tasks in a ready state or execution state. As stated in amended claim 1, the term “the represented task” refers to the task represented by “each said task container”.

The Examiner asserts that at claim 3, line 4, it is unclear whether “AND” relationship is done for the second time. Applicant has amended claim 1 to remove the reference to an “AND” relationship in claim 1.

The Examiner asserts that at claim 18, line 4 it is unclear whether “one or more resource object” are the actual resources in each task object, and that at line 5 it is unclear whether “the task” referred to is one of the representing tasks or one of the task objects. Claim 18 has been amended to read in part “each task object representing a task to be scheduled, each of the task objects having one or more resource objects, each resource object representing a resource that is selectable for the associated resource selection logic.” The specification states that “[i]n an implementation, the task containers 104, resource containers 108 and other modules are software objects that include data and methods...” Claim 18 has been further amended to read, in part, “a task log including a plurality of task objects, each said task object representing a task to be scheduled”.

Applicant believes the foregoing amendments and explanations sufficiently clarify the terms in the claims. Applicant respectfully requests that the rejection be withdrawn.

Rejections Under 35 U.S.C. § 103

The Examiner has rejected claims 1, 3-18 and 20-30 35 U.S.C. § 103 as being unpatentable over Sankaranarayanan et al. (WO 01/84301) in view of Walker et al., U.S. Patent No. 5,963,911 (“Walker”). Applicant traverses the rejection and has amended the claims 1, 15, 16, 18, 20 and 26 for clarification.

Independent claims 1, 15, 18 and 26 have been amended to clarify structural and functional aspects of implementations described in the specification. Generally, a task container represents a task. A task object (e.g., software object) is one particular implementation of a task container. A task container includes a callable function that determines a probability that the task represented by the called task container will influence (e.g., compete with) a specified task based on the current schedule state and required resources. According to one implementation, “[t]o develop a competition table the cost generator queries the task containers iteratively for pair-wise probabilities that they compete with each other task container.” As such, task containers form a logical and functional construct whereby the task containers themselves can

determine the relevant pair-wise costs. Sankaranarayan and Walker do not disclose such a logical and functional construct.

As amended, claim 1 recites in part “wherein each said task container further includes an interface function that when called determines the probability that the task represented by another task container will influence the task represented by the called task container based on a current schedule state and selection criteria specified in resource containers of the another task container and the called task container”. Claim 18 recites in part “and wherein each said task object further includes an interface function that, when called, determines the probability that another task represented by another task object will influence the task represented by said called task object, said determination based on a current schedule state and resource selection logic associated with said another task object and said called task object”.

Independent claims 1 and 18 as amended now specifically recite an interface function included in each task container and task object. The interface function determines the probability that another task will influence the task represented by the called task container or task object based on a current schedule state and resource selection criteria. Applicant can find no teaching or suggestion of such a logical and functional construct in Walker or Sankaranarayan.

Claim 15 as amended recite in part “querying a task container to determine a pair-wise cost of scheduling the first candidate task based on the first resources, the second resource and the selection criteria; and scheduling one or more of the first candidate task and the second candidate task based on the determined pair-wise cost.” As such, the task container can be queried to determine the pair-wise scheduling cost based on the first resources, second resource and selection criteria. Applicant can find no teaching or suggestion of such a logical and functional construct in Walker or Sankaranarayan.

Claim 26 has been amended to recite in part “reversing side-effects from the executing if the minimum cost task fails to execute.” When the minimum cost fails to execute properly with respect to the schedule, side-effects, such as allocated resources and scheduled tasks are reversed. New claim 31 recites a step of reversing side-effects of the failed execution. Applicant can find no teach or suggestion of such steps in Walker or Sankaranarayan.

Therefore, independent claims 1, 15, 18 and 26 and their respective dependent claims are in condition for allowance. Accordingly, Applicant requests withdrawal of the rejections.

Conclusion

Applicant has fully responded to each and every rejection in the Office action dated November 20, 2007 and believes that claims 1, 3 – 18, and 20 – 31 are in a condition for allowance. Therefore, Applicant respectfully request that a timely Notice of Allowance be issued in this case.

The Applicant believes no fees or petitions are due with this filing. However, should any such fees or petitions be required, please consider this a request therefore and authorization to charge Deposit Account No. 50-0463 as necessary.

If the Examiner should require any additional information or amendment, please contact the undersigned attorney. If the Examiner believes any issues could be resolved via a telephone interview, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

Date: Feb. 20, 2008

/Damon A. Rieth/
Damon A. Rieth, #52,167
Attorney for Applicant
USPTO Customer No. 69316